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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/008,948	12/06/2001	Franklin Zhigang Zhang		4817

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EXAMINER	
SHARMA, SUJATHA R	
ART UNIT	**PAPER NUMBER**
2684	

DATE MAILED: 02/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/008,948	ZHANG, FRANKLIN ZHIGANG	
	Examiner	Art Unit	
	Sujatha Sharma	2684	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-10* is/are rejected.

7)☒ Claim(s) *9 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mahany [US 5,546,397] in view of Marshall [US 6,829,214].

Regarding claim 6, Mahany discloses a redundant wireless network link. Mahany further discloses a redundant wireless link (RWNL) comprising:

- A processor (CPU/MAC processor in Figs 1-5)
- a system function means; see fig. 3, col.1, lines 43-col. 2, line 52, col. 3, lines 18-67, col. 5, line 47 – col. 6, line 37
- a plurality of wireless networking units; see fig. 3, access points 35,36
- a plurality of wired networking units; see fig. 3; LAN connection to the host computer
- at least one system bus; see fig. 3, connection between the CPU processor 37 and the radios 38 or 39
- whereby the said units are interconnected with each other via the said system bus, and whereby all the units are inside on enclosure with necessary connectors for connecting to the outside of the said enclosure. See fig. 3
- wherein the system function means is the digital possessing function running primary in the processor unit and among all the other units. See fig. 3, CPU processor 37 and col.1, lines 43-col. 2, line 52, col. 3, lines 18-67, col. 5, line 47 – col. 6, line 37

- Wherein said wireless networking unit can communicate with remote wireless networking device forming a wireless networking sub-link via antenna means; See fig. 3, and col.1, lines 43-col. 2, line 52, col. 3, lines 18-67, col. 5, line 47 – col. 6, line 37
- Wherein said system function means is running to control networking communication packets to be redistributed among all the wireless networking units for aggregating the networking bandwidth and providing redundancy among the wireless units; See fig. 3, and col.1, lines 43-col. 2, line 52, col. 3, lines 18-67, col. 5, line 47 – col. 6, line 37
- Wherein the said system function means is communicating between the said wireless and wired networking units in the same said RWNL device; See fig. 3, and col.1, lines 43-col. 2, line 52, col. 3, lines 18-67, col. 5, line 47 – col. 6, line 37

However, Mahany fails to disclose a method

- wherein the said system function mean is running to control networking packets to be redistributed among all the remaining communicating wireless networking sub-links and keep communication between the RWNL device and remote RWNL device when there is/ wireless networking sub-link that failed of communicating with remote networking device.

Marshall, in the same field of endeavor, teaches a method that allows replacement of failed communication modules while maintaining links between subscriber lines and redundancy bus. Marshall further discloses a method

- wherein the said system function mean is running to control networking packets to be redistributed among all the remaining communicating wireless networking sub-links and keep communication between the RWNL device and remote RWNL device when there

is/ wireless networking sub-link that failed of communicating with remote networking device. See col. 2, line 51 – col. 4, line 67; col. 5, lines 13-46 and Figs. 1,2,3.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the above teachings of Marshall to Mahany in order to avoid the disruption of service to subscribers when a radio is unavailable and to allow the redundant card to provide services for the subscriber while the new board is downloaded and made available.

Regarding claim 7, Mahany further discloses a method wherein the said RWNL device may include a control unit (MAC processor and/or CPU processor) for extending the system control to wireless networking units whereby said control unit connects to system bus, whereby said control unit connects to said wireless networking units and whereby said processor unit can extend the controlling capability via the control unit. See fig. 3, and col.1, lines 43-col. 2, line 52, col. 3, lines 18-67, col. 5, line 47 – col. 6, line 37

Regarding claim 8, Mahany further discloses a redundant wireless link (RWNL) comprising:

- two multi-channel redundant wireless networking link (RWNL) devices. See fig. 3 and col. 5, line 47 – col. 6, line 37
- whereby one said RWNL device is connecting to one wired network via its wired networking unit. See fig. 3; access point 35 connected to wired LAN
- Whereby the second RWNL device is connecting to another wired network via its wired networking unit; see fig. 3, access point 36 connected to wired LAN

- Whereby said two RWNL devices communicating to each other wirelessly; see link 30 in Fig. 3
- wherein one of the wireless networking units of the one said RWNL device communicating with remote corresponding wireless networking unit of the another said RWNL device form a wireless sub-link; see fig. 3
- wherein the said system function means in the RWNL device aggregating the networking bandwidth of the all the sub-links forming a virtual bigger networking link between two said RWNL devices; See fig. 3, and col.1, lines 43-col. 2, line 52, col. 3, lines 18-67, col. 5, line 47 – col. 6, line 37

However, Mahany fails to disclose a method

- wherein the said system function means of said two RWNL devices coordinating each other when one of the wireless sub-links is having problem and to disable the said problem wireless sub-link and further the said system function means continuing to redistribute the networking traffic among the remaining sub-links forming a new virtual communication link whereby two said wired networks connecting to each other via said virtual communication link redundantly

Marshall, in the same field of endeavor, teaches a method that allows replacement of failed communication modules while maintaining links between subscriber lines and redundancy bus. Marshall further discloses a method

- wherein the said system function means of said two RWNL devices coordinating each other when one of the wireless sub-links is having problem and to disable the said problem wireless sub-link and further the said system function means continuing to

redistribute the networking traffic among the remaining sub-links forming a new virtual communication link whereby two said wired networks connecting to each other via said virtual communication link redundantly. See col. 2, line 51 – col. 4, line 67; col. 5, lines 13-46 and Figs. 1,2,3.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the above teachings of Marshall to Mahany in order to avoid the disruption of service to subscribers when a radio is unavailable and to allow the redundant card to provide services for the subscriber while the new board is downloaded and made available.

Allowable Subject Matter

2. Claims 9,10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kapaunan [US 2004/0230875] Failure recovery in a multiprocessor configuration

Kubler [US 2005/0254475] Hierarchical data collection network supporting packetized voice communications among wireless terminals and telephones

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sujatha Sharma whose telephone number is 571-272-7886. The examiner can normally be reached on Mon-Fri 7.30am - 4.00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sujatha Sharma
January 27, 2006

EDAN ORGAD
PATENT EXAMINER/TELECOMM.
2/1/06